

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. *(Canceled)*
2. *(Previously Presented)* A method for producing, on a substrate, an electronic component with closely adjacent electrodes, the method comprising:
 - depositing a first metal layer onto the substrate;
 - structuring a first photo lacquer on a surface of the first metal layer, wherein a portion of the surface of the first metal layer does not have the first photo lacquer thereon;
 - etching the portion of the surface of the first metal layer not having the first photo lacquer;
 - undercut etching the first metal layer so that an overhang is defined by the first photo lacquer;
 - exposing, to a metal vapor, a surface of the first photo lacquer and an exposed portion of the substrate where the first metal layer was etched away so that a second metal layer is formed on the surface of the first photo lacquer and the exposed portion of the substrate where the first metal layer was etched away except in a space between the overhang and the substrate;
 - removing the second metal layer from the surface of the first photo lacquer and removing the first photo lacquer;

etching a hole into the substrate at a position other than a position of the first metal layer and the second metal layer;
depositing a third metal layer onto the substrate, the first metal layer, and the second metal layer;
applying an insulator onto the third metal layer;
applying an organic semiconductor onto the third metal layer and the insulator; and
applying a sealing layer onto the organic semiconductor.

3-12. (*Canceled*)

13. (*Previously Presented*) The method of claim 2, further comprising:
making the third metal layer from gold.

14-18. (*Canceled*)

19. (*Currently Amended*) An electronic component with closely adjacent electrodes, comprising:
a substrate;
a first electrode on the substrate, wherein the first electrode has a first thickness;
a second electrode on the substrate, wherein the second electrode has a second thickness, and wherein a separation between the first electrode and the second electrode is about 10 nanometers;

a third electrode in a hole in the substrate, wherein the third electrode has a third thickness, and wherein a first edge of the third electrode is positioned entirely within the separation between aligned with an edge of the first electrode and a second edge of the third electrode is aligned with an edge of the second electrode;

an insulator on the third electrode;

an organic semiconductor on the first electrode, the second electrode, and the insulator; and

a sealing layer on the organic semiconductor;

wherein the first and second thicknesses are greater than the third thickness.

20. *(Previously Presented)* The electronic component of claim 19, wherein the substrate comprises either a polymer film or a glass other than SiO₂.

21. *(Previously Presented)* The electronic component of claim 19, wherein the first electrode comprises either chromium or gold.

22. *(Previously Presented)* The electronic component of claim 19, wherein the third electrode comprises gold.

23. *(Currently Amended)* A device, comprising:

a first electrode on a substrate, wherein the first electrode has a first thickness,
and wherein the substrate includes a glass other than SiO₂;

a second electrode on the substrate, wherein the second electrode has a second thickness and is separated about 10 nanometers from the first electrode;

a third electrode in a hole in the substrate, wherein the third electrode has a third thickness and a first edge of the third electrode is positioned entirely between aligned with an edge of the first electrode and a second edge of the third electrode is aligned with an edge of the second electrode;

an insulator on the third electrode;

a semiconductor on the first electrode, the second electrode, and the insulator;

and

a sealing layer on the semiconductor;

wherein the first and second thicknesses are greater than the third thickness.

24. *(Previously Presented)* The device of claim 23, wherein the first electrode comprises either chromium or gold.
25. *(Previously Presented)* The device of claim 23, wherein the third electrode comprises gold.
26. *(Previously Presented)* The method of claim 2, wherein said structuring comprises structuring the first photo lacquer on the surface of the first metal layer so that the first photo lacquer is in direct physical contact with the surface of the first metal layer.

27. *(Previously Presented)* The electronic component of claim 19, wherein the first electrode and the second electrode are produced by:

forming a first metal layer on the substrate;

forming a photo lacquer on a first portion of the first metal layer;

etching a second portion of the first metal layer to expose a first portion of the substrate;

undercut etching the first metal layer to expose a second portion of the substrate so that an overhang is defined by the photo lacquer;

forming a second metal layer on the first portion of the substrate so that a space is defined between the overhang and the second portion of the substrate; and

removing the photo lacquer so that the first electrode comprises the first portion of the first metal layer and the second electrode comprises the second metal layer.

28. *(Previously Presented)* The device of claim 23, wherein the first electrode and the second electrode are produced by:

forming a first metal layer on the substrate;

forming a photo lacquer on a first portion of the first metal layer;

etching a second portion of the first metal layer to expose a first portion of the substrate;

undercut etching the first metal layer to expose a second portion of the substrate so that an overhang is defined by the photo lacquer;

forming a second metal layer on the first portion of the substrate so that a space is defined between the overhang and the second portion of the substrate; and
removing the photo lacquer so that the first electrode comprises the first portion of the first metal layer and the second electrode comprises the second metal layer.

29. (*Currently Amended*) An electronic component, comprising:
first and second electrodes positioned about 10 nanometers apart on a transparent substrate;
a transparent organic semiconductor on the first and second electrodes;
a transparent insulator on the transparent organic semiconductor; and
a third electrode on the transparent insulator ~~and positioned entirely between the first and second electrodes.~~ wherein a first edge of the third electrode is aligned with an edge of the first electrode and a second edge of the third electrode is aligned with an edge of the second electrode.
30. (*Previously Presented*) The electronic component of claim 29, wherein the transparent organic substrate comprises a polymer film or a glass other than SiO₂.
31. (*Previously Presented*) The electronic component of claim 29, wherein the first electrode comprises chromium or gold.

32. *(Previously Presented)* The electronic component of claim 29, wherein the second electrode comprises chromium or gold.
33. *(Previously Presented)* The electronic component of claim 29, wherein the third electrode comprises gold.
34. *(Previously Presented)* The electronic component of claim 29, wherein the first electrode and the second electrode are produced by:
- forming a first metal layer on the transparent substrate;
 - forming a photo lacquer on a first portion of the first metal layer;
 - etching a second portion of the first metal layer, which is different than the first portion, to expose a first portion of the transparent substrate;
 - undercut etching a third portion of the first metal layer, which is different than the first portion and the second portion, to expose a second portion of the transparent substrate, which is different than the first portion of the transparent substrate, so that an overhang is defined by the photo lacquer;
 - forming a second metal layer on the first portion of the transparent substrate so that a void of about 10 nanometers above the second portion of the transparent substrate is defined between the first metal layer and the second metal layer on the transparent substrate; and
 - removing the photo lacquer so that the first electrode comprises the first portion of the first metal layer and the second electrode comprises the second metal layer.

35. *(Previously Presented)* The electronic component of claim 29, wherein the third electrode is produced by:

forming the transparent organic semiconductor on the first and second electrodes;

forming the transparent insulator on the transparent organic semiconductor;

forming a photo lacquer of the transparent insulator;

exposing the photo lacquer through the transparent substrate, the transparent organic semiconductor, and the transparent insulator;

removing the exposed photo lacquer;

forming a metal layer on portions of the photo lacquer that were not exposed and the transparent insulator; and

removing the portions of photo lacquer that were not previously exposed along with the metal layer on the portions of photo lacquer, thereby leaving the metal layer positioned within a separation between the first and second electrodes.

36. *(Currently Amended)* The ~~electronic component~~ device of claim ~~[[29]]~~ 38, wherein the first electrode and the second electrode are produced by:

forming a first metal layer on the transparent substrate;

forming a photo lacquer on a first portion of the first metal layer;

etching a second portion of the first metal layer, which is different than the first portion, to expose a first portion of the transparent substrate;

undercut etching a third portion of the first metal layer, which is different than the first portion and the second portion, to expose a second portion of the transparent substrate, which is different than the first portion of the transparent substrate, so that an overhang is defined by the photo lacquer; forming a second metal layer on the first portion of the transparent substrate so that a void of about 10 nanometers above the second portion of the transparent substrate is defined between the first metal layer and the second metal layer on the transparent substrate; and removing the photo lacquer so that the first electrode comprises the first portion of the first metal layer and the second electrode comprises the second metal layer.

37. *(Currently Amended)* The ~~electronic component~~ device of claim [[29]] 38, wherein the third electrode is produced by:

forming the transparent organic semiconductor on the first and second electrodes;
forming the transparent insulator on the transparent organic semiconductor;
forming a photo lacquer of the transparent insulator;
exposing the photo lacquer through the transparent substrate, the transparent organic semiconductor, and the transparent insulator;
removing the exposed photo lacquer;
forming a metal layer on portions of the photo lacquer that were not exposed and the transparent insulator; and

removing the portions of photo lacquer that were not previously exposed along with the metal layer on the portions of photo lacquer, thereby leaving the metal layer positioned within a separation between the first and second electrodes.

38. (*Currently Amended*) A device, comprising:

first and second electrodes separated about 10 nanometers apart on a substrate,
wherein the substrate includes glass;

an organic semiconductor on the first and second electrodes;

an insulator on the organic semiconductor; and

a third electrode on the insulator ~~and positioned entirely between the first and second electrodes;~~

wherein a first edge of the third electrode is aligned with an edge of the first electrode and a second edge of the third electrode is aligned with an edge of the second electrode; and

wherein the substrate, the organic semiconductor, and the insulator are transparent.

39. (*Previously Presented*) The device of claim 38, wherein the first electrode comprises chromium or gold.

40. (*Previously Presented*) The device of claim 38, wherein the third electrode comprises gold.